

# Pierwszak

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **21**
- SRM **6.5**
- Style **Witbier**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

## Steps

- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.2 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **25 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.5 kg (40.3%)	82 %	4
Grain	Viking Wheat Malt	2.5 kg (40.3%)	83 %	5
Grain	Strzegom Karmel 300	0.2 kg (3.2%)	70 %	299
Adjunct	Płatki pszeniczne	0.5 kg (8.1%)	60 %	3
Adjunct	Płatki owsiane	0.5 kg (8.1%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Aroma (end of boil)	Citra	30 g	5 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WB-06	Wheat	Dry	17 g	---

## Extras

Type	Name	Amount	Use for	Time
Spice	Skórka słodkiej pomarańczy	10 g	Boil	15 min
Spice	Trawa cytrynowa	5 g	Boil	10 min
Spice	Skórka gorzkiej pomarańczy	5 g	Boil	15 min